Taylor Winter

PhD Candidate

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Summary

I am currently studying a PhD at the University of Victoria, Wellington. My research is in health psychology, focusing on the influence of physiological and environmental factors on mood, such as the gut-microbiome and experiences of discrimination. Work has led to a broad range of experience in statistical methods including structural equation modelling, multi-level modelling, and Bayesian methods. As part of my study, I also share my statistical knowledge via means such as a tutorial article on informed Bayesian analysis, and the development of statistical software to make complex techniques more accesible.

I also work with Stats NZ and Ngāi Tahu providing statistical advice and conducting analytics. My specialty is Bayesian modelling and big data. This has led to me developing skill in reproducible workflows and project management techniques which I can bring to an academic role. Example projects include heading the development of an official statistic on poverty and pipeline development for cellphone data from Spark and Vodafone.

Employment

University of Otago — *2019 - Present*
Assistant Research Fellow

Statistics New Zealand — *2019 - Present*
Senior Data Scientist

Te Runanga o Ngai Tahu — *2018 - 2019*
Statistician

Statistics New Zealand — *2016 - 2019*
Statistical Analyst

University of Otago — *2013 - 2016*
Senior Research Assistant

Queensland Department of Natural Resources and Mines — *2013 - 2015*
Project Officer

University of Otago — *2012 - 2014*
Research Assistant

Education

Victoria University of Wellington — *Wellington*
Doctor of Philosophy — *Present*

University of Otago — *Dunedin*
Master of Science — *2016*

Awards and scholarships

2018	IPANZ Young Professional Of The Year (Top 3)	*Institute of Public Administration NZ*
2018	Victoria Doctoral Scholarship	*Victoria University of Wellington*
2015	Otago Research Master's Scholarship	*University of Otago*

Publications

1. Winter, T., Jose, P., Riordan, B., Bizumic, B., Ruffman, T., Hunter, J., & Scarf, D. (n.d.). Left-wing support of authoritarian submission to protect against societal threat. *Political Psychology*.

2. Riordan, B., Winter, T., Flett, J., Scarf, D., Jose, P., & Conner, T. (n.d.). Does the fear of missing out (FoMO) moderate the relationship between social networking use and affect? A daily diary study. *Computers in Human Behavior*.

3. Winter, T., Riordan, B., Surace, A., Scarf, D., & Jose, P. (2020). *A tutorial on the use of informative bayesian priors for minority research*. PsyArXiv.

4. Winter, T., Conner, T., & Jose, P. (n.d.). Methodological and conceptual complexities of assessing relationships between single-occasion CRP inflammation and daily affect. *Brain, Behavior, & Immunity - Health*.

5. Zimmerman, H., Riordan, B., Winter, T., Bartonicek, A., & Scarf, D. (n.d.). Are new zealand psychology students more susceptible to essentialist explanations for mental illness? Neuroessentialism and mental illness stigma in psychology and non-psychology students. *New Zealand Journal of Psychology*.

6. Scarf, D., Winter, T., Riordan, B., Hunter, J., Tustin, K., Gollop, M., Taylor, N., Kokaua, J., & Poulton, R. (n.d.). A longitudinal study of mental wellbeing in students that transition into PhD study. *Frontiers in Psychology*. https://doi.org/10.31234/osf.io/eq6xg

7. Raubenheimer, J. E., Riordan, B. C., Merrill, J. E., Winter, T., Ward, R. M., Scarf, D., & Buckley, N. A. (2021). Hey google! Will new zealand vote to legalise cannabis? Using google trends data to predict the outcome of the 2020 new zealand cannabis referendum. *International Journal of Drug Policy*.

8. Winter, T., Riordan, B., Pakpour, A., Griffiths, M., Mason, A., Poulgrain, J., & Scarf, D. (2020). Evaluation of the english version of the fear of COVID-19 scale and its relationship with behavior change and political beliefs. *International Journal of Mental Health and Addiction*.

9. Riordan, B. C., Raubenheimer, J., Ward, R. M., Merrill, J. E., Winter, T., & Scarf, D. (2020). Monitoring the sentiment of cannabis-related tweets in the lead up to new zealands cannabis referendum. *Drug and Alcohol Review*.

10. Scarf, D., Zimmerman, H., Winter, T., Boden, H., Graham, S., Riordan, B. C., & Hunter, J. A. (2020). Association of viewing the films joker or terminator: Dark fate with prejudice toward individuals with mental illness. *JAMA Network Open*.

11. Graham, S., Mason, A., Riordan, B., Winter, T., & Scarf, D. (2020). Taking a break from social media improves wellbeing through sleep quality. *Cyberpsychology, Behavior, and Social Networking*.

12. Winter, T., Conner, T., & Jose, P. (2020). Identifying profiles of affective change: An ecological momentary assessment of flourishers. *Emotion*.

13. Trevis, K. J., McTavish, E., Winter, T., Fu, Y., McTavish, J., Wilson, B., Oliver, J., & Franz, E. A. (2019). Harnessing the brain's neuro-compensatory processes: Lessons from a high-functioning person with complete agenesis of the corpus callosum. *Neuropsychologie Clinique Et Appliquée*.

14. Winter, T., Riordan, B., & Surace, A. (2019). The relationship between hazardous alcohol use and discrimination among mÄ⊠ori in aotearoa new zealand. *Addiction*.

15. Surace, A., Riordan, B., & Winter, T. (2019). Do new zealand sexual minorities engage in more hazardous drinking than non-sexual minorities? *Drug and Alcohol Review*.

16. Pittar, N., Winter, T., Falland-Cheung, L., Tong, D., & Waddell, J. N. (2018). Scalp simulation a novel approach to site-specific biomechanical modeling of the skin. *Journal of the Mechanical Behavior of Biomedical Materials*.

17. Falland-Cheung, L., Waddell, J. N., Lazarjan, M. S., Jermy, M. C., Winter, T., Tong, D., & Brunton, P. A. (2017). Use of agar/glycerol and agar/glycerol/water as a translucent brain simulant for ballistic testing. *Journal of the Mechanical Behavior of Biomedical Materials*.

18. Franz, E. A., Fu, Y., Moore, M., Winter, T., Mayne, T., Debnath, R., & Stringer, C. (2016). Fooling the brain by mirroring the hand: Brain correlates of the perceptual capture of limb ownership. *Restorative Neurology and Neuroscience*.

19. Tong, D. C., Winter, T. J., Jin, J., Bennett, A. C., & Waddell, J. N. (2015). Quantification of subconcussive impact forces to the head using a forensic model. *Journal of Clinical Neuroscience*. https://doi.org/10.1016/j.jocn.2014.11.018

20. Winter, T. J., & Franz, E. A. (2014). Implication of the anterior commissure in the allocation of attention to action. *Frontiers in Psychology*.

Presentations and posters

Authoritarian submission on the left and right during the covid-19 pandemic in New Zealand

2020

NEW ZEALAND PSYCHOLOGICAL SOCIETY CONFERENCE, WELLINGTON

Using overseas surveys to produce reliable models of sexual minorities

2019

NEW ZEALAND POPULATION CONFERENCE, WELLINGTON

Alcohol use disparities among gender and sexual minorities in New Zealand (Poster)

2019

COLLABORATIVE PERSPECTIVES ON ADDICTION, RHODE ISLAND

Iwi data tool using integrated data and R Shiny

2017

IWI DATA CONFERENCE, CHRISTCHURCH

Using data to support a collective impact model of Maori potential

2016

POPULATION ASSOCIATION OF NEW ZEALAND CONFERENCE, CHRISTCHURCH

The effect of motherhood on income

2016

NEW ZEALAND ASSOCIATION OF ECONOMISTS CONFERENCE, WELLINGTON

A machine learning approach to classifying life course outcomes

2016

LONGITUDINAL AND MULTIVARIATE ANALYSIS NETWORK (STATS NZ), WELLINGTON

Methodology for comparing incomes between parents and non-parents

2016

STATISTICAL METHODS SEIMINAR (STATS NZ), WELLINGTON

Inter-hemispheric inhibition in the autistic brain

2014

NEUROETHICS SEMINAR, DUNEDIN

Skills

- Health psychology research
- Research design and analysis
- Structural equation modelling and causal analysis
- Bayesian statistics and multi-level modelling
- Machine learning techniques such as random forests and neural nets
- Teaching reproducible research practices and statistics
- Knowledge of Tikanga Māori